

REMARKS

In response to the Office Action mailed October 25, 2007, Applicants respectfully request reconsideration. To further the prosecution of this application, each of the rejections set forth in the Office Action has been carefully considered and is addressed below. The application as now presented is believed to be in condition for allowance.

Rejections Under 35 U.S.C. §102

The Office Action rejects claims 29, 30, 32-46, 48-62, and 64-91 under 35 U.S.C. §102(e) as purportedly being unpatentable over Hochberg (Pub. No. 2005/0055518). Applicants respectfully disagree and traverse this rejection.

I. Overview of Embodiments of the Invention

An overview of embodiments of the invention was provided previously in Applicant's response to a Final Office Action dated March 15, 2007. The overview is reproduced herein for the Examiner's convenience.

Embodiments of the invention are directed to retention periods for units of data stored on a storage system. In a system that implements a retention period for a unit of data, the system may associate a retention period with the unit of data (Specification, page 9, lines 6-9). ***The retention period may define a period of time during which the unit of data cannot be deleted or modified*** (Specification, page 9, lines 9-10).

In some embodiments, retention classes may be used to define retention periods for one or more units of data stored on a storage system. For example, a unit of data may identify a retention class to which it belongs (Specification, page 31, lines 16-19). The retention class may have a value associated with it that defines the retention period for all units of data the belong to the retention class (Specification, page 31, lines 16-19). For example, as shown in Figure 8, units of data belonging to the "E-mail" retention class have a retention period of seven years from the date they were initially stored on the storage system, while units of data belonging to the "Financial Records"

retention class have a retention period of five years from the date of their initial storage (Specification, page 31, lines 24-28; Figure 8).

The retention period for the units of data belonging to a particular retention class may be modified by altering the value associated with the retention class (Specification, page 31, lines 16-21). The use of retention classes allows the retention period for a large number of units of data to be modified without having to individually alter the retention period for each unit of data (Specification, page 31, lines 20-21).

When the storage system receives a request to delete a unit of data, the storage system may first determine to which retention class the unit of data belongs, and then determine the value of the retention period for the retention class (Specification, page 31, lines 28-31). This value is the retention period for the unit of data. The storage system may then determine whether the retention period has expired and, if it has not, deny the deletion request (Specification, page 31, line 31 – page 32, line 2).

It should be appreciated that the foregoing overview of embodiments of the invention is provided merely to assist the Examiner in appreciating various aspects of the present invention. However, not all of the description provided above necessarily applies to each of the independent claims pending in the application. Therefore, the Examiner is requested to not rely upon the foregoing summary in interpreting any of the claims or in determining whether they patentably distinguish over the prior art of record, but rather is requested to rely only upon the language of the claims themselves and the arguments specifically related thereto provided below.

II. Discussion of Hochberg

Hochberg is directed to a method and system for managing retention of stored objects (Abstract). When a request to store an object is received, a new object entry is added to an object table (§0038, lines 4-18; Fig. 4, blocks 100 and 102). The object entry in the object table specifies an object ID for the object, a name for the object, the location at which the object is stored, the archive policy associated with the object, and several other fields (§0038, lines 15-18; Fig. 2). The archive policy for the object is specified in the request to store the object (§38, lines 4-18). If the specified archival policy is not an event-based policy, then an expiration entry for the object is

created in an expiration table (§0039, lines 4-11; Fig. 4, block 112). The expiration entry for the object specifies its object ID; the retention period start (which is set as the current time), the retention period (which is set to the retention specified in the archive policy defined for the object), and a status field (which is set to “active”) (§0039, lines 6-17; Fig. 3).

When a request to delete an object is received, the expiration entry for the object in the expiration table is accessed, and it is determined if the retention period has expired by determining whether the current time minus the retention period start (specified in the expiration entry) exceeds the retention period specified in the expiration entry (§0046, lines 13-26; Fig. 8, blocks 244 and 246). If not, then the request to delete the object is denied (Fig. 8, block 240). Otherwise, the object is deleted and its entries are removed from the object table and expiration table (Fig. 8, block 234).

A. Independent Claims 29 and 45

Each of claims 29 and 45 recites: (B) determining whether a previously-defined retention period for the unit of data has expired by performing acts of; (B1) retrieving first information, associated with the unit of data, that identifies a manner of accessing second information specifying the previously-defined retention period; and (B2) using the first information to retrieve the second information specifying the previously-defined retention period...wherein the first information is information identifying a retention class to which the unit of data belongs, and wherein the second information is a retention period that defines a period of time during which the unit of data cannot be deleted from and/or modified on the at least one storage system, and is associated with the retention class.

Hochberg does not disclose the concept of a retention class and thus does not disclose determining whether a previously-defined retention period for an object has expired by first retrieving information identifying a retention class to which the object belongs, and then using the information identifying the retention class to retrieve a retention period associated with the retention class.

The Office Action contends that Hochberg discloses retention classes and retention periods in paragraphs 0022, 0023, 0029, and 0030. Paragraph 0029 of Hochberg discusses archive policies.

According to Hochberg, an archive policy defines a retention policy and/or an event-based retention policy, among other things (Hochberg, ¶0029, lines 1-4). That is, though an archive policy may define certain policies related to retaining data, the archival policy does not define a retention class.

As disclosed above, in embodiments of the present disclosure, a retention class **allows the retention period for a large number of units of data to be modified by changing the retention period associated with the retention class, rather than having to individually alter the retention period for each unit of data** (Specification, page 31, lines 20-21). In the system of Hochberg, the archival policy applies to only a single unit of data. Thus, if it is desired to change the retention period of multiple content units, the retention period for each content unit must be individually altered.

Paragraph 0022 of Hochberg discusses event-based retention in more detail. In Hochberg's system, event-based retention is a method whereby the beginning of the retention period is deferred until the occurrence of an event (rather than being the time when the object is stored) (Hochberg, ¶0022, lines 6-8). For example, if laws require that companies keep employee information for two years after an employee leaves the company, event-based retention policies allow for the beginning of the retention period to be the day the employee leaves the company, rather than the day that the employee information is stored (Hochberg, ¶0022, lines 8-12). Since event-based retention is only concerned with when a retention period begins, event-based retention as disclosed in Hochberg does not constitute a retention class as disclosed in the present application.

Paragraphs 0023 and 0030 of Hochberg discuss deletion holds and deletion hold policies. According to Hochberg, a deletion hold policy institutes a marker (i.e., a deletion hold) that prevents expiration and removal of an archived object, and effectively overrides an archival policy (Hochberg, ¶0023, lines 1-5). Accordingly, neither Hochberg's deletion hold nor deletion hold policy is a retention class because neither defines the length of a retention period, but they instead prevent an archived object from being deleted for an undetermined amount of time until the deletion hold is removed by altering the deletion hold policy.

Furthermore, in Hochberg, when a delete request is received, the system does not first determine which archive policy is associated with the object identified in the request, and then determine the retention period specified by the archive policy. Rather, the retention period for an

object is determined when the object is stored and an expiration entry for the object is created in the expiration table (Hochberg, ¶0039, lines 4-11; Fig. 4, block 112). Thus, when a delete request is received, the retention period specified in the expiration entry is accessed and used to determine whether the object may be deleted. There is simply nothing in Hochberg analogous to the claimed retention class that is evaluated in response to a delete request to determine the retention period for an object.

As seen from the foregoing, Hochberg does not disclose the concept of a retention class. Thus, independent claims 29 and 45 patentably distinguish over Hochberg and the rejection of these claims should be withdrawn.

Claims 30 and 32-44 depend from claim 29 and claims 46 and 48-60 depend from claim 45 and are patentable for at least the same reasons.

B. Independent Claim 61

Claim 61 recites a controller to, “determine whether a retention period for the unit of data has expired by performing acts of: retrieving first information, associated with the unit of data, that identifies a manner of accessing second information specifying the previously-defined retention period; and using the first information to retrieve the second information specifying the previously-defined retention period... wherein the first information is information identifying a retention class to which the unit of data belongs, wherein the second information is a retention period that defines a period of time during which the unit of data cannot be deleted from and/or modified on the storage system, and is associated with the retention class...”

As should be clear from the discussion above, Hochberg fails to disclose or suggest these limitations of claim 61. Thus, claim 61 patentably distinguishes over Hochberg, such that the rejection should be withdrawn.

Claims 62 and 64-73 depend from claim 61 and are patentable for at least the same reasons.

C. Independent Claims 74 and 80

Independent claims 74 and 80 each recite an act of “transmitting a request from the at least one host to the at least one storage system to modify the retention period specified by the retention

class, thereby modifying a period of time during which the plurality of data units belonging to the retention class cannot be deleted from and/or modified on the at least one storage system.”

Hochberg fails to disclose or suggest this limitation of claims 74 and 80. In the system of Hochberg, a retention period for an object is not modified by modifying the retention period of a retention class to which the object belongs, but rather by modifying information specified in the object entry for that particular object. Figure 7 of Hochberg shows a process by which the retention period for an object may be modified by modifying the archive policy specified in the object entry for the object. A request to modify the archive policy is limited to the policy for a single object specified in the request (§0045, lines 4-5; Fig. 7, block 200). When it is determined that the modification is permitted, the modification is performed by updating the retention period specified in the archive policy 36 field of the object entry 30 (§0045, lines 19-25). Thus, the archive policy for an object is modified by modifying the object’s entry in the object table. The system of Hochberg does not modify the archive policies for multiple objects at once by modifying information that specifies the retention period for multiple objects belonging to a retention class. Rather, in the system of Hochberg, the archive policy for each object is modified on an individual basis, by updating the object entry associated with that object.

That is, in the system of Hochberg, to modify the retention period of multiple objects, the object entry for each object must be modified. Hochberg does not disclose modifying the retention period for multiple previously stored objects by modifying the retention period for a retention class to which the objects belong.

Thus, claims 74 and 80 patentably distinguish over Hochberg such that the rejection should be withdrawn.

Claims 75-79 depend from claim 74 and claims 81-86 depend from claim 80 and are patentable for at least the same reasons as the independent claim from which they depend.

D. Independent Claim 86

Independent claim 86 recites a controller to “transmit a request to the at least one storage system to modify the retention period specified by the retention class, thereby modifying a period of

time during which the plurality of data units belonging to the retention class cannot be deleted from and/or modified on the at least one storage system.”

As should be clear from the discussion above, Hochberg does not disclose or suggest this limitation of claim 86. Thus, claim 86 patentably distinguishes over Hochberg such that the rejection of this claim should be withdrawn.

Claims 87-91 depend from claim 86 and are patentable for at least the same reasons.

Rejections under 35 U.S.C. §103

The Office Action rejects claims 29, 45, 61, 66, 73, 74, 77, 80, 83, 86, and 89 under 35 U.S.C. §103(a) as allegedly being obvious over Hochberg in view of Hecht (U.S. Patent No. 5,535,322). Applicants respectfully disagree and traverse this rejection.

The Office Action contends that “Hochberg discloses all of the elements of the claimed invention but arguably does not disclose wherein the first information is information identifying a retention class to which the unit of data belongs, wherein the second information is a retention period associated with the retention class...,” but asserts that Hecht discloses this limitation (Office Action, page 8). As should be apparent from the discussion above, Hochberg does not disclose all of the elements of independent claims 29, 45, 61, 74, 80, and 86. Furthermore, Hochberg and Hecht, taken alone or in combination fail to disclose all of the elements of independent claims 29, 45, 61, 74, 80, and 86, as is detailed below.

III. Discussion of Hecht

Hecht is directed to a work flow manager to manage and control the flow of work items in a well-defined application process (abstract). For example, the system of Hecht may be applied to assist the IRS in more expeditiously processing tax documents (Hecht, col. 3, lines 26-41). The work flow process may include scanning, data capturing, data perfecting, and image archiving of paper tax documents (Hecht, col. 6, lines 9-11). For archival, the images are stored for a specified amount of time depending on their submission type (Hecht, col. 17, lines 58-61). For example, individual returns may be stored for 7 years and business and other returns may be stored for 75 years (Hecht, col. 9, lines 12-14). After archival, an Archived Submission Management Retention

Service manages the retention of the archived submission (Hecht, col. 9, lines 37-41) by determining the time at which the archived submission is deleted from the system (Hecht, col. 22, 61-65).

A. The Combination of Hochberg and Hecht is Improper

The combination of Hochberg and Hecht is improper as the Office Action fails to establish a *prima facie* case of obviousness. The Office Action asserts that “it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hochberg to include above limitation(s) based on the teaching of Hecht for the purpose of managing the archiving and deletion of medical images,” (Office Action, page 8).

MPEP §2142 states that “The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious...The Federal Circuit has stated that rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” Applicants respectfully assert that the Office Action has not articulated any reasoning with a rational underpinning because the only statement provided is that it would have been obvious to modify Hochberg in the manner asserted in the Office Action for managing the archiving and deletion of medical images.

It is unclear why one of ordinary skill in the art would have modified Hochberg based on the teachings of Hecht to manage the archiving and deletion of medical images, as the system of Hochberg already permits archiving and deletion of objects, which may include any type of data including medical images. Moreover, it is unclear how adding retention classes into the system of Hochberg would aid or improve the archiving of medical images in the system of Hochberg.

Furthermore, MPEP §2143 discloses a list of seven exemplary rationales (i.e., combining prior art elements according to known methods to yield predictable results, simple substitution of one known element for another to obtain predictable results, use of a known technique to improve similar devices (methods or products) in the same way, etc.) that may support a conclusion of obviousness. However, it is not evident on which if any of these rationales the Office Action relies to support the conclusion of obviousness. Applicants respectfully request that should the rejection

be maintained, the Examiner clearly specify the rationale relied upon to support the conclusion of obviousness.

Moreover, there is no reason one of skill in the art would have modified Hochberg to incorporate the retention classes of Hecht. That is, Hochberg's method of deciding whether or not a deletion request for an object may be granted is to look up the expiration entry for the object in the expiration table to determine if the current time is more or less than the difference between the retention period and the time of storage of the object (which are specified in the expiration entry for the object). Thus, in the system of Hochberg, to modify the retention period of multiple content units requires modifying the expiration entry for each individual content unit. Modifying the system of Hochberg to somehow use retention classes would not allow for the retention period for a large number of units of data to be modified by changing the retention period associated with the retention class. Rather, even if retention classes were somehow incorporated into the system of Hochberg, modifying the retention period for multiple content units would still require accessing the expiration entry for each individual content unit and changing the retention period stored therein. Thus, one of skill in the art would not have modified the system of Hochberg to incorporate retention classes, as doing so would provide no benefit.

B. Hochberg and Hecht Taken Alone or in Combination Fail to Teach All Elements of Independent Claims 29, 45, 61, 74, 80, and 86.

Applicants further submit that even if one were to somehow combine Hochberg and Hecht, these references, taken alone or in combination fail to disclose all elements of the independent claims. All of the independent claims recite, in one way or another, "a retention period that defines a period of time during which the unit of data cannot be deleted from and/or modified on the at least one storage system." Neither Hecht nor Hochberg teach or suggest retention periods during which stored data objects may not be deleted from and/or modified on a storage system.

The Office Action concedes that Hochberg fails to disclose this limitation. Hecht also fails to disclose this limitation as the retention periods of Hecht are fundamentally different than the claimed retention periods. Independent claims 29, 45, 61, 74, 80, and 86 have been amended to more clearly specify that retention periods in the present application refer to, "a period of time

during which the unit of data cannot be deleted from and/or modified on the at least one storage system.” Hecht discloses a “retention class,” which is a period of time during which archived submissions are permitted to exist on system (Hecht, col. 9, lines 12-14; col. 22, lines 61-65). That is, a retention class defines a time after which the archived submission will be automatically deleted. Hecht is completely silent as to whether an archived submission may be deleted before the end of the specified period of time. Since both Hochberg and Hecht fail to disclose the above-quoted limitation, Hochberg and Hecht, taken alone or in combination fail to teach all of the elements of each of the independent claims. Accordingly, it is respectfully requested that the rejections to independent claims 29, 45, 61, 74, 80, and 86 as being allegedly obvious over Hochberg in view of Hecht be withdrawn.

Claims 66 and 73 depend from claim 61, claim 77 depends from claim 74, claim 83 depends from claim 80, and claim 89 depends from claim 86, and these claims are patentable for at least the same reasons provided for the claims from which they depend.

CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

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